

WHAT IS CLAIMED IS:

1. An aluminum alloy consisting essentially of: 0.6 to 1.8 wt% of silicon; 0.6 to 1.8 wt% of magnesium; 0.8 wt% or less of copper; 0.2 to 1.0 wt% of manganese; 0.25 wt% or less of chromium; 0.0 to 0.15 wt% of titanium; and unavoi-  
5 dably contained impurities.

2. A use of an aluminum alloy in manufacturing an aluminum cast-forged product, wherein a preformed material is  
10 cast from the aluminum alloy consisting essentially of 0.6 to 1.8 wt% of silicon, 0.6 to 1.8 wt% of magnesium, 0.8 wt% or less of copper, 0.2 to 1.0 wt% of manganese, 0.25 wt% or less of chromium, 0.0 to 0.15 wt% of titanium, and unavoi-  
15 dably contained impurities, and the preformed material is forged to manufacture an aluminum cast-forged product.

3. The use in manufacturing an aluminum cast-forged product according to claim 2, wherein the preformed material has a shape indicating a forging ratio of 18 to 60%, assuming  
20 that the shape of a final product is 100%.

4. The use in manufacturing an aluminum cast-forged product according to claim 2, wherein the aluminum cast-forged product is a suspension part for a vehicle, a frame  
25 for the vehicle, or a part for an engine.

5. The use in manufacturing an aluminum cast-forged

product according to claim 3, wherein an aluminum cast-forged product is a suspension part for a vehicle, a frame for the vehicle, or a part for an engine.

5           6. A method of manufacturing an aluminum cast-forged product consisting essentially of 0.6 to 1.8 wt% of silicon, 0.6 to 1.8 wt% of magnesium, 0.8 wt% or less of copper, 0.2 to 1.0 wt% of manganese, 0.25 wt% or less of chromium, 0.0 to 0.15 wt% of titanium, and unavoidable  
10 impurities, the method including:

          a melting step of melting an aluminum alloy consisting essentially of 0.6 to 1.8 wt% of silicon, 0.6 to 1.8 wt% of magnesium, 0.8 wt% or less of copper, 0.2 to 1.0 wt% of manganese, 0.25 wt% or less of chromium, 0.0 to 0.15  
15 wt% of titanium, and the unavoidable impurities at about 680 to 780°C to obtain a molten metal;

          a casting step of casting the obtained molten metal at a mold temperature of about 60 to 150°C to obtain a preformed material which is a raw material for forging;

20           a rough forging step of heating the raw material for forging to a surface temperature at about 380°C to a melting point or less and forging the raw material to obtain a roughly forged material;

          a finish forging step of heating the roughly forged  
25 material to a surface temperature at about 380°C to the melting point or less and forging the roughly forged material to obtain a finish forged material; and

a clipping flash step of removing flash from the finish forged material to obtain a final product.

7. The method according to claim 6, wherein the aluminum alloy includes the flash generated at the time of the forging as a portion of a raw material.

8. The method according to claim 7, wherein a forging ratio of the shape of a preformed material is in a range of 18 to 60%, assuming that the shape of a final product is 100%.

9. A suspension part for a vehicle, a frame for the vehicle, or a part for an engine prepared by a method of manufacturing an aluminum cast-forged product consisting essentially of 0.6 to 1.8 wt% of silicon, 0.6 to 1.8 wt% of magnesium, 0.8 wt% or less of copper, 0.2 to 1.0 wt% of manganese, 0.25 wt% or less of chromium, 0.0 to 0.15 wt% of titanium, and unavoidable impurities, the method including:

a melting step of melting an aluminum alloy consisting essentially of 0.6 to 1.8 wt% of silicon, 0.6 to 1.8 wt% of magnesium, 0.8 wt% or less of copper, 0.2 to 1.0 wt% of manganese, 0.25 wt% or less of chromium, 0.0 to 0.15 wt% of titanium, and the unavoidable impurities at about 680 to 780°C to obtain a molten metal;

a casting step of casting the obtained molten metal at a mold temperature of about 60 to 150°C to obtain a

preformed material which is a raw material for forging;

a rough forging step of heating the raw material for forging to a surface temperature at about 380°C to a melting point or less and forging the raw material to obtain a roughly forged material;

a finish forging step of heating the roughly forged material to a surface temperature at about 380°C to the melting point or less and forging the roughly forged material to obtain a finish forged material; and

a clipping flash step of removing flash from the finish forged material to obtain a final product.

10. The suspension part for the vehicle, the frame for the vehicle, or the part for the engine according to claim 9, wherein the aluminum alloy includes flash generated at the time of the forging as a portion of a raw material.

11. The suspension part for the vehicle, the frame for the vehicle, or the part for the engine according to claim 9, wherein a forging ratio of the shape of the preformed material is in a range of 18 to 60%, assuming that the shape of the final product is 100%.

12. The suspension part for the vehicle, the frame for the vehicle, or the part for the engine according to claim 9, having mechanical properties such as a tensile strength of 320 MPa or more, a proof stress of 280 MPa or

more, and an elongation of 10% or more.

13. The suspension part for the vehicle, the frame  
for the vehicle, or the part for the engine according to  
5 claim 10, having mechanical properties such as a tensile  
strength of 320 MPa or more, a proof stress of 280 MPa or  
more, and an elongation of 10% or more.

14. The suspension part for the vehicle, the frame  
10 for the vehicle, or the part for the engine according to  
claim 11, having mechanical properties such as a tensile  
strength of 320 MPa or more, a proof stress of 280 MPa or  
more, and an elongation of 10% or more.